



LE No. 013

**Camin Cargo Control, Panama S.A.**

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**CERTIFICATE OF QUALITY No. CPL-PAN-7648**

**Name of Client** : Triton Energy of Panama, Corp.  
**Client's Address** : Calle Elvira Mendez, Ed. Vallarino, Piso No. 3, Panama, Panama Rep. of Panama  
**Client's Reference No.** : **TBA** **CCC WorkOrder No.** : **PAN-7648**  
**Vessel or Job** : **Shore Tank No. 2** **Description of Operation** : Sampling & Testing  
**Description of Sample** : Composite Sample U-M-L **Product** : LDO  
**Sample Label / ID #** : 0009-2016 **Type of Sample** : Composite  
**Terminal** : Telfer Tanks Terminal **Date & Time of Sampling** : January 04, 2017 at 23:50 hours  
**Location** : Cristobal, Colon, Panama **Date & Time of Receipt** : January 05, 2017 at 08:00 hours  
**Drawn By** : Camin Cargo Control, Panama S.A. **Date & Time of Testing** : January 05, 2017 at 15:30 hours  
**Witnessed By** : N/A **/ Representing** : N/A

**TESTS PERFORMED**

| Description of Test                        | Units             | Method | Results        |             |             |
|--------------------------------------------|-------------------|--------|----------------|-------------|-------------|
|                                            |                   |        |                | Minimum     | Maximum     |
| API Gravity @ 60°F                         | °API              | D 4052 | 37.0           | 32.0        | ----        |
| Density at 15°C                            | kg/m <sup>3</sup> | D 4052 | 839.3          | ----        | 865.0       |
| Kinematic Viscosity at 40°C                | cSt               | D 445  | 2.914          | 1.9         | 4.1         |
| Water and Sediment by Centrifuge           | % Vol             | D 2709 | 0.00           | ----        | 0.05        |
| Micro Carbon Residue, 10% Bottoms          | mass %            | D 4530 | < 0.10         | ----        | 0.3         |
| Corrosion, Copper Strip, 3 hours at 50°C   | rating            | D 130  | 1a             | ----        | 2           |
| Appearance                                 | C & B             | D 4176 | Clear & Bright | ----        | ----        |
| Color, ASTM Scale                          | rating            | D 1500 | < 2.0          | ----        | 2.5         |
| Ash Content                                | mass %            | D 482  | < 0.001        | ----        | 0.01        |
| Flash Point, P.M.C.C Procedure A           | °C (°F)           | D 93A  | 67 ( 153 )     | 60 ( 140 )  | ----        |
| Sulfur by X-Ray Fluorescence Spectrometry  | mass % (ppm)      | D 4294 | 0.0086 (86)    | ----        | 0.05 (500)  |
| Cetane Index, calculated                   | calculated        | D 976  | 51.7           | 45          | ----        |
| Distillation, ASTM                         | -----             | D 86   | ----           | ----        | ----        |
| 10%                                        | °C (°F)           | D 86   | 214 (418)      | ----        | Report      |
| 50%                                        | °C (°F)           | D 86   | 272 (522)      | ----        | 288 ( 550 ) |
| 90%                                        | °C (°F)           | D 86   | 330 (626)      | 282 ( 540 ) | 338 ( 640 ) |
| FBP                                        | °C (°F)           | D 86   | 359 (678)      | ----        | Report      |
| Residue                                    | Vol %             | D 86   | 0.5            | ----        | 2           |
| Loss                                       | Vol %             | D 86   | 0.5            | ----        | 2           |
| Lubricity Test @ 60°C (Wear Scar Diameter) | µm                | D 6079 | 410            | ----        | 520         |

**Notes:****Nuevo Lote del Tank 02: 0117LDO01****Volumen: 25583.66 bbls Netos**

The results of the tests indicated on this report are only valid for the indicated sample.  
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**CAMIN CARGO CONTROL, PANAMA S.A.**

**Boris Zorrilla**

Laboratory Manager

For Camin Cargo Control, Panama S.A.